

UNIT TEST PLAN

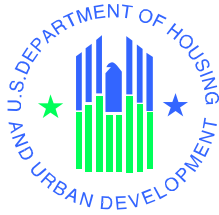
*Public and Indian Housing
Real Estate Assessment Center
Resident Assessment Subsystem (RASS)
Release 8.4.0.0*

U.S. Department of Housing and Urban Development

December 14, 2004

Revision Sheet

Release No.	Date	Revision Description
Rev. 1.1	11/17/2004	Initial document.
Rev. 1.2	11/22/2004	Internal Team Review
Rev. 1.3	12/03/2004	Internal Team Review
Rev. 1.4	12/05/2004	Management Review
Rev. 1.5	12/08/2004	Client Review
Rev. 1.6	12/10/2004	Final Version



Unit Test Plan Authorization Memorandum

I have carefully assessed the Unit Test Plan for the Resident Assessment Subsystem (RASS) Release 8.4.0.0. This document has been completed in accordance with the requirements of the HUD System Development Methodology.

MANAGEMENT CERTIFICATION - Please check the appropriate statement.

_____ The document is accepted.

_____ The document is accepted pending the changes noted.

_____ The document is not accepted.

We fully accept the changes as needed improvements and authorize initiation of work to proceed. Based on our authority and judgment, the continued operation of this system is authorized.

Delton Nichols
RASS Project Manager

DATE

Yangja Lee
RASS GTM/IT Manager

DATE

TABLE OF CONTENTS

1.0	GENERAL INFORMATION.....	1-1
1.1	PURPOSE.....	1-1
1.2	SCOPE	1-1
1.3	SYSTEM OVERVIEW	1-2
1.4	PROJECT REFERENCES.....	1-3
1.5	ACRONYMS AND ABBREVIATIONS	1-6
1.6	POINTS OF CONTACT	1-7
1.6.1	Information	1-7
1.6.1	Coordination	1-8
2.0	TEST DEFINITION.....	2-1
2.1	AT-RISK REPORT.....	2-1
2.1.1	Requirements to be Tested	2-1
2.1.2	Expected Results	2-2
2.1.3	Extent of Test	2-3
2.1.4	Test Constraints	2-3
2.2	DEMOGRAPHIC REPORT	2-4
2.2.1	Requirements to be Tested	2-4
2.2.2	Expected Results	2-4
2.2.3	Extent of Test	2-5
2.2.4	Test Constraints	2-5
2.3	THRESHOLD REPORT	2-6
2.3.1	Requirements to be Tested	2-6
2.3.2	Expected Results	2-6
2.3.3	Extent of Test	2-6
2.3.4	Test Constraints	2-7
2.4	PHA HISTORY REPORT.....	2-8
2.4.1	Requirements to be Tested	2-8
2.4.2	Expected Results	2-8
2.4.3	Extent of Test	2-9
2.4.4	Test Constraints	2-9
2.5	SCORING PROCESS.....	2-10
2.5.1	Requirements to be Tested	2-10
2.5.2	Expected Results	2-11
2.5.3	Extent of Test	2-11
2.5.4	Test Constraints	2-12
2.6	COMMENT FUNCTIONALITY ON EDIT SCORES SCREENS	2-13
2.6.1	Requirements to be Tested	2-13
2.6.2	Expected Results	2-13
2.6.3	Extent of Test	2-13
2.6.4	Test Constraints	2-14
2.7	COMPONENT ACCESS DATE.....	2-15
2.7.1	Elements to be Tested.....	2-15
2.7.2	Expected Results	2-15
2.7.3	Extent of Test	2-15
2.7.4	Test Constraints	2-16
2.8	CONSORTIA	2-17
2.8.1	Elements to be Tested.....	2-17
2.8.2	Expected Results	2-17

2.8.3	Extent of Test	2-18
2.8.4	Test Constraints	2-18
2.9	IMPLEMENTATION PLAN ACTIVITY DATES	2-19
2.9.1	Elements to be Tested.....	2-19
2.9.2	Expected Results	2-19
2.9.3	Extent of Test	2-20
2.9.4	Test Constraints	2-21
2.10	UPGRADES TO REPORTS TO SUPPORT CHANGES IN PHAS REGULATION.....	2-22
2.10.1	Elements to be Tested.....	2-22
2.10.2	Expected Results	2-22
2.10.3	Extent of Test	2-23
2.10.4	Test Constraints	2-23
2.11	THE THIRD PARTY ADMINISTRATOR ROLE CODE	2-24
2.11.1	Elements to be Tested.....	2-24
2.11.2	Expected Results	2-24
2.11.3	Extent of Test	2-24
2.11.4	Test Constraints	2-25
2.12	TEST HIERARCHY	2-26
2.13	TEST DATA	2-26
2.13.1	Test Data Reduction	2-26
2.13.2	Input Test Data Control	2-26
2.13.3	Output Test Data Control	2-27
2.13.4	Data Recovery	2-27
2.13.5	Test Data Handling.....	2-27
2.14	INPUT COMMANDS.....	2-27
2.15	OUTPUT NOTIFICATION	2-27
2.16	SUPPORT SOFTWARE	2-28
2.17	ERROR HANDLING	2-28
2.18	TEST CONDITIONS	2-28
3.0	TEST EXECUTION	3-1
3.1	TEST SCHEDULE	3-1
3.2	TEST PROGRESSION.....	3-1
3.3	TEST CRITERIA	3-1
3.3.1	Tolerance	3-1
3.3.2	Samples	3-2
3.3.3	System Breaks	3-2
3.4	TEST CONTROL.....	3-2
3.5	TEST PROCEDURES.....	3-2
3.5.1	Setup.....	3-2
3.5.2	Initialization	3-2
3.5.3	Preparation	3-2
3.5.4	Termination	3-3
3.5.5	Test Cycle Performance Activities	3-3

1.0 GENERAL INFORMATION

1.0 General Information

1.0 GENERAL INFORMATION

1.1 Purpose

The Resident Assessment Subsystem (RASS) Unit & Integration Test Plan, for Release 8.4.0.0, is one of four Housing and Urban Development (HUD) System Development Methodology (SDM) Build Phase deliverables. This SDM Build Phase deliverable includes the Unit & Integration Test Plan, Maintenance Manual, Operations Manual, and User's Manual.

This document outlines the RASS Release 8.4.0.0 Unit Test Plan for new and modified RASS functionality. This release will include:

- Implementation Plan functionality updates to ensure that PHAs perform all their activities within a specified timeframe.
- A new At-Risk PHA report to list of PHAs, for a given field office, that are at risk of failing RASS.
- Enhancement to the scoring process to automatically assign last year's scores for selected PHAs.
- Upgrades to reports to support changes in PHAS regulation such as the Small PHA Deregulation Rule and FYE changes.
- Enhancement to the Demographic report to display PHA level survey section scores by a resident's age and gender.
- Enhancement to the PHA History report to display the total number of units, the number of low rent units, the number of Section 8 units and the number of occupied units for a PHA and update the Follow-up plan certification information.
- Standardization of RASS component access dates.
- Updates to the count for undeliverable addresses on the Required Survey Size Threshold report.
- Updates to the Comment functionality on the Review/Approve PHA Scores report.
- Removal of the consortia functionality from the system because the calculation of a consortia PHAs score is being moved outside the PIH-REAC's Secure Systems.

1.2 Scope

RASS Release 8.4.0.0 will expand on RASS Release 8.3.1.0 functionality and will be implemented by February 11, 2005. The following table describes the functionality to be implemented.

New Capabilities (High Level)
Update the RASS Implementation Plan Activity functionality to ensure that PHAs perform activities to implement the survey close to the defined Implementation Plan window.
Create an At-Risk PHA report to pull up a list of PHAs for a selected field office that is at risk of failing RASS.
Enhance the scoring process to provide the capability to automatically assign last year's survey scores for a selected PHA.

1.0 General Information

Upgraded Capability (High Level)
Update reports to support the changes to the PHAS regulations such as the Small PHA Deregulation Rule and FYE changes.
Expand the Demographic report to display PHA level survey section scores by a resident's age and gender.
Enhance the PHA History Report to display the total number of units, the number of low rent units, the number of Section 8 units, the number of occupied units for a PHA and update the Follow-up Plan certification information column to display "Not Required" if the Follow-Up Plan certification is not required.

Elimination of Deficiencies
Standardize the RASS Component access dates by implementing the same logic for inserting the certification window dates and the logic for verification against dates for all three components.
Fix the undeliverable address count calculation on the Required Survey Size Threshold Report to only display the counts for selected FYE.
Fix the Comment functionality on the Review/Approve PHA Scores report to work with special characters.

Elimination/Reduction of Capabilities No Longer Needed
Update the RASS online system to remove the consortia functionality as the calculation of a consortia PHAs score is being moved outside the PIH-REAC's Secure Systems.

1.3 System Overview

RASS supports the Customer Service and Satisfaction Survey, which is the fourth indicator in HUD's Public Housing Assessment System (PHAS) Rule.

The following table identifies the system environment for RASS Release 8.4.0.0:

System Environment	
System	Real Estate Assessment Center System (REACS)
Subsystem	Resident Assessment Subsystem (RASS).
Sponsor	Public and Indian Housing – Real Estate Assessment Center (REAC)
PCAS	00307680
System Code	P089
System Category	Non-major
Operational Status	Operational
System Environment	Web Based
Requirements	Quality Software Services, Inc. (QSSI)
Design	QSSI
Development	QSSI
System and Integration Testing	QSSI
User Acceptance Testing	HUD RASS Client Team
Deployment	QSSI with REAC DCG (Paradigm Soln./ Booz-Allen & Hamilton)
Maintenance	QSSI

1.0 General Information

The following table identifies and briefly describes the different users of RASS:

User Environment	
REAC RASS Business Team	The REAC RASS Business Team uses RASS to view PHA and development-level scoring, certification reports, and Multifamily Survey result information. The team also uses the system to complete the various processes (Unit Address Sampling, Implementation Plan, Survey and Follow-up Plan Scoring, RASS Score Approval) required during resident assessment.
Public Housing Agency (PHA)	PHAs use RASS to participate annually in the resident assessment process. PHAs certify their unit addresses, complete an Implementation Plan for resident notification about the annual resident survey process, and complete a Follow-up Plan outlining sources of funding and dates to be completed for required areas (low-scoring survey sections) identified by the resident survey results. PHAs may also use the system to view survey result and resident response rate information.
Survey Administrator	After the sampling program has generated a file of units to be surveyed, RASS downloads the sample file to the Survey Administrator. The Survey Administrator distributes the RASS survey to the units indicated in the sample file. Once the Survey Administrator collects and analyzes survey data, the survey results and response rate information are uploaded in RASS from the Survey Administrator so that PHA(s) and Multifamily Owners/Agents may view this information.
Multifamily (MF) Owners/Agents	MF Owners/Agents use RASS to view survey result information for their assigned properties.
Other HUD Users (includes HUD PIH Field Offices)	All other HUD users have read-only access to RASS in order to review PHA and Multifamily Housing development or property level survey result information.

1.4 Project References

The following documents are available to provide a comprehensive understanding of the resident assessment process. Most documents are available via the REAC Document Library. Additionally, several of the documents listed below are available through the PHA Resident Assessment Internet site at <http://www.hud.gov/offices/reac/products/prodrass.cfm>

Release 8.4.0.0
"RASS Release 8.4.0.0 System-Subsystem Specification", QSSI, 07/28/04
"RASS Release 8.4.0.0 Validation, Verification and Testing Plan", QSSI, 07/28/04
"RASS Release 8.4.0.0 Data Requirements Document", QSSI, 07/20/04
"RASS Release 8.4.0.0 System Support & Acquisition Plan", QSSI, 07/20/04
"RASS Release 8.4.0.0 Functional Requirements Document", QSSI, 07/20/04
"RASS Release 8.4.0.0 System Security & Privacy Plan", QSSI, 07/20/04
"RASS Release 8.4.0.0 Needs Statement", QSSI, 06/30/04
"RASS Release 8.4.0.0 Project Plan", QSSI, 06/30/04

1.0 General Information

Release 8.4.0.0
"RASS Release 8.4.0.0 Feasibility Study", QSSI, 06/30/04
"RASS Release 8.4.0.0 Cost/Benefit Analysis", QSSI, 06/30/04
"RASS Release 8.4.0.0 System Decision Paper", QSSI, 06/30/04
"RASS Release 8.4.0.0 Risk Analysis", QSSI, 06/30/04
Release 8.3.0.0
"RASS Release 8.3.0.0 User's Manual", QSSI, 06/11/04
"RASS Release 8.3.0.0 Maintenance Manual", QSSI, 06/11/04
"RASS Release 8.3.0.0 Operations Manual", QSSI, 06/11/04
"RASS Release 8.3.0.0 System Test Results and Evaluation Report", QSSI, 4/15/04
"RASS Release 8.3.0.0 Validation, Verification, and Testing Plan", QSSI, 03/16/04
"RASS Release 8.3.0.0 Training Plan", QSSI, 03/16/04
"RASS Release 8.3.0.0 System-Subsystem Specifications", QSSI, 03/16/04
"RASS Release 8.3.0.0 Program Specifications", QSSI, 03/16/04
"RASS Release 8.3.0.0 Database Specification", QSSI, 03/16/04
"RASS Release 8.3.0.0 Unit Test Plan", QSSI, 03/09/04
"RASS Release 8.3.0.0 Data Requirements Document", QSSI, 12/19/03.
"RASS Release 8.3.0.0 Functional Requirements Document", QSSI, 12/19/03.
"RASS Release 8.3.0.0 System Support & Acquisition Plan", QSSI, 12/19/03.
"RASS Release 8.3.0.0 System Security & Privacy Plan", QSSI, 12/19/03.
"RASS Release 8.3.0.0 Needs Statement", QSSI, 12/09/03.
"RASS Release 8.3.0.0 Project Plan", QSSI, 12/09/03.
"RASS Release 8.3.0.0 Feasibility Study", QSSI, 12/09/03.
"RASS Release 8.3.0.0 Cost/Benefit Analysis", QSSI, 12/09/03.
"RASS Release 8.3.0.0 System Decision Paper", QSSI, 12/09/03.
"RASS Release 8.3.0.0 Risk Analysis", QSSI, 12/09/03.
Release 8.2.0.0
"RASS Release 8.2.0.0 Project Plan", QSSI, 10/09/03.
"RASS Release 8.2.0.0 Test Results and Evaluation Report", QSSI, 11/21/03.
"RASS Release 8.2.0.0 Functional Requirements Document", QSSI, 10/21/03.
"RASS Release 8.2.0.0 Program Specifications", QSSI, 11/14/03.
"RASS Release 8.2.0.0 System Specifications Document", QSSI, 10/21/03.
"RASS Release 8.2.0.0 Unit Test Plan", QSSI, 10/20/03.
Releases 8.0.0.0 & 8.1.0.0
"RASS Releases 8.0.0.0 & 8.1.0.0 Maintenance Manual", QSSI, 06/17/03.
"RASS Releases 8.0.0.0 & 8.1.0.0 Operations Manual", QSSI, 06/17/03.
"RASS Releases 8.0.0.0 & 8.1.0.0 Unit Test Plan", QSSI, 06/17/03.
"RASS Releases 8.0.0.0 & 8.1.0.0 User's Manual", QSSI, 06/17/03.
"RASS Releases 8.0.0.0 & 8.1.0.0 User's Manual Appendix", QSSI, 06/17/03.
"RASS Releases 8.0.0.0 & 8.1.0.0 System Specifications Document", QSSI, 04/30/03.
"RASS Releases 8.0.0.0 & 8.1.0.0 Program Specifications Document", QSSI, 04/30/03.
"RASS Releases 8.0.0.0 & 8.1.0.0 Validation and Verification Plan", QSSI, 04/30/03.

1.0 General Information

Releases 8.0.0.0 & 8.1.0.0
"RASS Releases 8.0.0.0 & 8.1.0.0 Training Plan", QSSI, 04/30/03.
"RASS Releases 8.0.0.0 & 8.1.0.0 Database Specifications Document", QSSI, 04/30/03.
"RASS Releases 8.0.0.0 & 8.1.0.0 Data Requirements Document", QSSI, 03/18/03.
"RASS Releases 8.0.0.0 & 8.1.0.0 Functional Requirements Document", QSSI, 03/18/03.
"RASS Releases 8.0.0.0 & 8.1.0.0 System Support & Acquisition Plan", QSSI, 03/18/03.
"RASS Releases 8.0.0.0 & 8.1.0.0 System Security & Privacy Plan", QSSI, 03/18/03.
"RASS Release 8.0.0.0 Needs Statement", QSSI, 01/10/03.
"RASS Release 8.0.0.0 Project Plan", QSSI, 01/10/03.
"RASS Release 8.0.0.0 Feasibility Study", QSSI, 01/10/03.
"RASS Release 8.0.0.0 Cost/Benefit Analysis", QSSI, 01/10/03.
"RASS Release 8.0.0.0 System Decision Paper", QSSI, 01/10/03.
"RASS Release 8.0.0.0 Risk Analysis", QSSI, 01/10/03.

Release 7.1.0.0
"RASS Release 7.1.0.0 User's Manual", Accenture, 01/25/2002.
"RASS Release 7.1.0.0 Integration Test Results and Evaluation Report", Accenture, 01/25/2002.
"RASS Release 7.1.0.0 System Test Results and Evaluation Report", Accenture, 01/25/2002.
"RASS Release 7.1.0.0 Release Notes", Accenture, 01/22/2002.
"RASS Release 7.1.0.0 Test Plan", Accenture, 12/18/2001.
"RASS Release 7.1.0.0 Validation, Verification, and Testing Plan", Accenture, 12/11/2001.
"RASS Release 7.1.0.0 System/Subsystem Specifications", Accenture, 11/15/2001.
"RASS Release 7.1.0.0 Database Specifications", Accenture, 11/15/2001.
"RASS Release 7.1.0.0 Program Specifications", Accenture, 11/15/2001.
"RASS Release 7.1.0.0 System Support and Acquisition Plan", Accenture, 11/06/2001.
"RASS Release 7.1.0.0 Functional Requirements Document", Accenture, 11/06/2001.
"RASS Release 7.1.0.0 Data Requirements Document", Accenture, 11/06/2001.
"RASS Release 7.1.0.0 System Security and Privacy Plan", Accenture 11/06/2001.
"RASS Release 7.1.0.0 Needs Statement", Accenture, 10/22/01.
"RASS Release 7.1.0.0 Project Plan", Accenture, 10/22/01.
"RASS Release 7.1.0.0 Feasibility Study", Accenture, 10/22/01.
"RASS Release 7.1.0.0 Cost/Benefit Analysis", Accenture, 10/22/01.
"RASS Release 7.1.0.0 Risk Analysis", Accenture, 10/22/01.

Release 7.0.0.0
"RASS Release 7.0.0.0 User's Manual", Accenture, 09/21/2001.
"RASS Release 7.0.0.0 System Decision Paper", Accenture, 09/21/01.
"RASS Release 7.0.0.0 Maintenance Manual", Accenture, 09/21/2001.
"RASS Release 7.0.0.0 Operations Manual", Accenture, 09/21/2001.
"RASS Release 7.0.0.0 Installation and Conversion Plan", Accenture, 09/21/2001.
"RASS Release 7.0.0.0 Integration Test Results and Evaluation Report", Accenture, 09/21/2001.
"RASS Release 7.0.0.0 System Test Results and Evaluation Report", Accenture, 08/30/2001.
"RASS Release 7.0.0.0 Release Notes", Accenture, 08/08/2001.
"RASS Release 7.0.0.0 Test Plan", Accenture, 07/19/2001.
"RASS Release 7.0.0.0 Training Plan", Accenture, 06/20/2001.

1.0 General Information

Release 7.0.0.0
"RASS Release 7.0.0.0 Validation, Verification, and Testing Plan", Accenture, 06/20/2001.
"RASS Release 7.0.0.0 System/Subsystem Specifications", Accenture, 06/08/2001.
"RASS Release 7.0.0.0 Database Specifications", Accenture, 06/08/2001.
"RASS Release 7.0.0.0 Program Specifications", Accenture, 06/08/2001.
"RASS Release 7.0.0.0 Project Schedule/ Workplan", Accenture, 05/31/2001.
"Accenture Quality Control Plan", Accenture, 05/31/2001.
"RASS Release 7.0.0.0 System Support and Acquisition Plan", Accenture, 05/14/2001.
"RASS Release 7.0.0.0 Functional Requirements Document", Accenture, 05/14/2001.
"RASS Release 7.0.0.0 Data Requirements Document", Accenture, 05/14/2001.
"RASS Release 7.0.0.0 System Security and Privacy Plan", Accenture 05/14/2001.
"RASS Release 7 Multifamily Functionality Business Requirements Document (draft)", Version 1.1, KPMG, 04/25/2001.
"FY2001 Resident Assessment Risk Assessment (Update)", Accenture, 05/15/2001.
"FY2001 Resident Assessment Feasibility Study (Update)", Accenture, 05/15/2001.
"FY2001 Resident Assessment Cost/Benefit Analysis (Update)", Accenture, 05/15/2001.
"FY2001 Resident Assessment Project Plan (Update)", Accenture, 05/15/2001.
"FY2001 Resident Assessment Needs Statement (Update)", Accenture, 05/15/2001.

1.5 Acronyms and Abbreviations

The following table defines terms and acronyms that may be used throughout the SDM Define Phase Documentation for RASS Release 8.4.0.0.

Term	Definition
APP	Annual Performance Plan
BAH	Booz-Allen & Hamilton
BOP	Business Operating Plan
BRD	Business Requirements Document
DCG	Development Coordination Group
FRD	Functional Requirements Document
FYE	Fiscal Year End
HA	Housing Agency/Housing Authority
HUD	Department of Housing and Urban Development
HUDCAPS	HUD Central Accounting Processing System
HUDWeb	HUD's Intranet Web Site
JAD	Joint Application Development
MF	Multifamily
MFH	Multifamily Housing
NASS	Integrated Assessment Subsystem
OMB	Office of Management and Budget
PDF	Portable Document Format
PHA	Public Housing Agency/Public Housing Authority
PHAS	Public Housing Assessment System

1.0 General Information

Term	Definition
PIC	PIH Information Center
PIH	Public and Indian Housing
POC	Point of Organizational Contact
QSSI	Quality Software Services, Inc.
RASS	Resident Assessment Subsystem
REAC	Real Estate Assessment Center
REACS	Real Estate Assessment Center System
SDM	System Development Methodology
SOA	Section of the Act
TAC	Technical Assistance Center (formerly the Customer Service Center)
TARC	Troubled Agency Recovery Center
TRACS	Tenant Rental Assistance Certification System
TBD	To Be Defined
WASS	Web Access Security System

1.6 Points of Contact

1.6.1 Information

The following table lists Points of Organizational Contact (POCs) that may be beneficial for future reference.

Contact Name	Organization	Telephone Number
Vernette Elliott	HUD – Contracting Officer	202-708-1772 ext.7124
Yvette T. Conner	HUD – GTR	202-708-1583 ext.2620
Delton Nichols	REAC – RASS Project Manager	202-475-8795
Yangja K. Lee	REAC – RASS GTM/IT Manager	202-475-8772
Kevin N. Jones	REAC – RASS Assistant IT Manager	202-475-8761
Patrick Evans	BAH	202-475-8655
Gautam Ijoor	QSSI	202-475-8644
Alex Rozental	QSSI	202-475-8634
Eugene Lubarsky	QSSI	202-475-8812
Deren Luo	QSSI	202-475-8812
Robin Hilton	QSSI	202-475-8633
Theresa Han	QSSI	202-475-8633
Robert Armstrong	QSSI	202-475-8634

Contact	Contact Information
RASS System Administrator	Delton Nichols, in coordination with the WASS subsystem, will facilitate RASS system administration as needed. 202-708-4932 ext.3115

1.0 General Information

Contact	Contact Information
REAC Technical Assistance Center	1-888-245-4860
REAC RASS E-mail address	REAC_RASS@hud.gov
REAC Internet Site	http://www.hud.gov/offices/reac/index.cfm
REAC RASS Internet Site	http://www.hud.gov/offices/reac/products/prodrass.cfm
REAC Intranet Site	http://hudweb.hud.gov/po/reac
HUD Customer Service Center Branch	1-202-708-3300

1.6.1 Coordination

Coordination must occur among the following organizations to successfully implement RASS Release 8.4.0.0:

Organization	Support Function
Paradigm Soln./BAH	Development Coordination, Installation, Deployment
HUD IT	Implementation Coordination, Installation, Deployment
Mandaree/Peaerson	3 rd Party Contractor: Resident Communication/Survey Support
QSSI	Requirements, Design, Development, Testing, Maintenance, Technical Support /Operations, Project Management
REAC	Business Requirements Support, Project Management
WASS	Security

Listed below are the coordination dates to which each Public Housing Assessment System (PHAS) must adhere in order to achieve the February 11, 2004 release date for Release 8.4.0.0.

Code Locked Date	Integration Test Start Date	Integration Test End Date	Final HARTS Request Submission Date	Release Date
12/15/2004	12/29/2004	01/25/2005	02/08/2005	02/11/2005

2.0 TEST DEFINITION

2.0 Test Definition

2.0 TEST DEFINITION

2.1 At-Risk Report

The objective of the unit test is to thoroughly test the functionality at the module level. Each field, link, button, text block, and object is tested by the developers to insure that the code meets the design specified in the Design Phase documentation. Documentation of this test effort includes test conditions, scripts, and cycle control sheets.

2.1.1 Requirements to be Tested

Summary Conditions	Detailed Condition	New and Enhanced Functionality
CT01	01	Provide capability to display a new 'At-risk PHA Report' in the main PHA Reports drop-down menu in the REAC Reporting Area on the RASS Main screen.
CT01	02	Provide capability to display a list of PHA's grouped by each Field Office, with Field Office name in the headers.
CT01	03	Provide capability to organize report alphabetically and alphanumerically based on Field Office names, and then alphabetically and alphanumerically based on PHA ID.
CT01	04	Provide capability to generate At-risk report by specifying specific PHAs or range of PHAs in the REAC Reporting Area. The PHAs displayed on the At risk PHA Report should include their Field Office names in the headers.
CT01	05	Provide capability to select Field Office from drop-down menu on the At-risk Report screen.
CT01	06	Provide capability to display 25 PHAs at a time, and support pagination on the At-risk Report screen.
CT01	07	Provide capability to determine at-risk PHAs by using the following criteria: PHAs that were assigned prior year's survey score PHAs with a zero original survey score from the most recent survey PHAs that failed to meet the threshold response rate required to issue a statistically valid survey score.
CT01	08	Provide the capability to display total counts for each Field Office summarizing the following counts: PHAs with the prior year's score PHAs with a survey score of zero PHAs with unmet thresholds Unit addresses Duplicate addresses Undeliverable addresses Individually listed PHAs display an asterisk in the Prior Year's Score, Zero Survey Score, and Threshold Not Met columns indicating that the PHA failed the criteria. A PHA count is displayed for Unit Address, Duplicate

2.0 Test Definition

Summary Conditions	Detailed Condition	New and Enhanced Functionality
		Address and Undeliverable Address counts.

2.1.2 Expected Results

Summary Conditions	Detailed Condition	Expected Results
CT01	01	The PHA Report will be generated with Pagination.
CT01	02	Click a Field Office Name to generate a new At-risk report.
CT01	03	Clicking All Offices will present the reporting data in ascending alphabetical field office order and within each field office ascending alphabetical PHAs. Click an individual Field Offices and the order will be in ascending alphabetical PHAs order.
CT01	04	In the REAC Reporting Area: Click the radio button for PHAs and select 1 to 4 PHAs. Only those entered PHAs should be shown on the PHA report. Click the radio button for PHA range. Only those entered PHAs should be shown on the PHA report.
CT01	05	Within the predefined field offices determined in RASS Main, Selecting a different field office will generate an At-risk report for any selected field office.
CT01	06	Creating an At-risk report with less than 25 PHAs will not create a pagination link. Creating an At-Risk report with more than 25 PHAs will generate a multiple pagination page links.
CT01	07	All PHAs that were flagged as having been assigned a prior year's survey score will be identified with an asterisk. All PHAs that were flagged as a zero original survey score from the most recent survey will be identified with an asterisk. All PHAs that were flagged as failing to meet the threshold response rate will be identified with an asterisk.
CT01	08	The At-risk Report will have a PHA Id and Name, Unit Address count, Duplicate address count, Undeliverable Address count, displaying with an asterisk the Prior Score Assigned, Zero Survey Score, and Threshold Not Met. The report will also list the total PHA count of PHAs at risk of failing RASS within these selected on the main screen.

2.0 Test Definition

2.1.3 Extent of Test

The new/modified software units and programs that are to be included in the test for RASS Release 8.4.0.0 are listed below. The overall program functions, screens, and user interfaces are part of these test elements. For program functions please see the Master list of Programs, and Program Descriptions, in the RASS Program Specifications document – sections 1.7 & 2.0 respectively.

ColdFusion Files	New/Mod
w_rass pha_at_risk_report.cfm	New

Stored Procedures	New/Mod
sp_rass pha_atrisk_report.sql	New

Entry Criteria: The unit test plan should be developed as soon as requirements verification is complete. The following tasks must be completed before conducting the unit test:

- Design phase documents must be created, (System/Subsystem Specifications, Database Specifications, Program Specifications, Validation, Verification, and Testing Plan Training Plan)
- Test data is established under the control of the RASS development team and as specified in the RASS Unit Test Plan.
- Test Conditions are documented in the RASS Unit Test Plan, RASS Unit Test Analysis Report and RASS Unit Test Plan.
- Expected results are identified/developed for test event execution.

Exit Criteria: The unit test will be considered complete when the following are accomplished:

- All test conditions of new/modified code in ColdFusion and stored procedure code have been exercised.
- All of the functional requirements for this release have been successfully tested.
- All test results match the expected results from the unit test.

2.1.4 Test Constraints

There are no test constraints in the RASS system.

2.0 Test Definition

2.2 Demographic Report

The objective of the unit test is to thoroughly test the functionality at the module level. Each field, link, button, text block, and object is tested by the developers to insure that the code meets the design specified in the Design Phase documentation. Documentation of this test effort includes test conditions, scripts, and cycle control sheets.

2.2.1 Requirements to be Tested

Summary Conditions	Detailed Condition	New and Enhanced Functionality
CT01	01	Enhance capability to calculate survey section scores by age and gender at PHA and National levels.
CT01	02	Enhance capability to display survey section scores by age and gender at PHA and National levels.
CT01	03	Enhance capability to store historically survey section scores by age and gender at PHA and National levels.
CT01	04	Provide capability to navigate to different sections using links at the top of the screen.
CT01	05	Provide capability to navigate to the top of the Demographic report screen from all the section areas.

2.2.2 Expected Results

Summary Conditions	Detailed Condition	Expected Results
CT01	01	The demographic calculations are expanded from only the average PHA to include Maintenance and Repair, Communication, Safety, Services and Housing Property Appearance.
CT01	02	The gender and age are displayed for a PHA and for National Average for all of the Demographic Distribution titles.
CT01	03	The scoring program calculates the demographic data for all survey sections and stores it into the rass_line_item table.
CT01	04	The user can click one of the section titles at the top of the screen to navigate to the appropriate Demographic Distribution titles.
CT01	05	The user can click the "top" link alongside one of the Demographic Distribution titles to navigate to the top of the screen.

2.0 Test Definition

2.2.3 Extent of Test

The new/modified software units and programs that are to be included in the test for RASS Release 8.4.0.0 are listed below. The overall program functions, screens, and user interfaces are part of these test elements. For program functions please see the Master list of Programs, and Program Descriptions, in the RASS Program Specifications document – sections 1.7 & 5.0 respectively.

ColdFusion Files	New/Mod
w_rass_demographic_report.cfm	New

Stored Procedures	New/Mod
sp_rass_demographic_report.sql	New
s_score_rass_survey.sql	Modified

Entry Criteria: The unit test plan should be developed as soon as requirements verification is complete. The following tasks must be completed before conducting the unit test:

- Design phase documents must be created, (System/Subsystem Specifications, Database Specifications, Program Specifications, Validation, Verification, and Testing Plan Training Plan)
- Test data is established under the control of the RASS development team and as specified in the RASS Unit Test Plan.
- Test Conditions are documented in the RASS Unit Test Plan, RASS Unit Test Analysis Report and RASS Unit Test Plan.
- Expected results are identified/developed for test event execution.

Exit Criteria: The unit test will be considered complete when the following are accomplished:

- All test conditions of new/modified code in ColdFusion and stored procedure code have been exercised.
- All of the functional requirements for this release have been successfully tested.
- All test results match the expected results from the unit test.

2.2.4 Test Constraints

There are no test constraints in the RASS system.

2.0 Test Definition

2.3 Threshold Report

The objective of the unit test is to thoroughly test the functionality at the module level. Each field, link, button, text block, and object is tested by the developers to insure that the code meets the design specified in the Design Phase documentation. Documentation of this test effort includes test conditions, scripts, and cycle control sheets.

2.3.1 Requirements to be Tested

Summary Conditions	Detailed Condition	New and Enhanced Functionality
CT01	01	Provide capability to calculate and display count of undeliverable addresses only for the specified FYE.

2.3.2 Expected Results

Summary Conditions	Detailed Condition	Expected Results
CT01	01	The undeliverable address count for each PHA will be calculated by joining the undeliverable_address, pih_project and participant_assessment tables and the group count of project_id from the undeliverable_address table will be displayed in the Number Of Surveys Undeliverable column.

2.3.3 Extent of Test

The new/modified software units and programs that are to be included in the test for RASS Release 8.4.0.0 are listed below. The overall program functions, screens, and user interfaces are part of these test elements

ColdFusion Files	New/Mod
pha_required_survey_size_threshold.cfm	Modified

Entry Criteria: The unit test plan should be developed as soon as requirements verification is complete. The following tasks must be completed before conducting the unit test:

- Design phase documents must be created, (System/Subsystem Specifications, Database Specifications, Program Specifications, Validation, Verification, and Testing Plan Training Plan)
- Test data is established under the control of the RASS development team and as specified in the RASS Unit Test Plan.
- Test Conditions are documented in the RASS Unit Test Plan, RASS Unit Test Analysis Report and RASS Unit Test Plan.
- Expected results are identified/developed for test event execution.

2.0 Test Definition

Exit Criteria: The unit test will be considered complete when the following are accomplished:

- All test conditions of new/modified code in ColdFusion and stored procedure code have been exercised.
- All of the functional requirements for this release have been successfully tested.
- All test results match the expected results from the unit test.

2.3.4 Test Constraints

There are no test constraints in the RASS system.

2.0 Test Definition

2.4 PHA History Report

The objective of the unit test is to thoroughly test the functionality at the module level. Each field, link, button, text block, and object is tested by the developers to insure that the code meets the design specified in the Design Phase documentation. Documentation of this test effort includes test conditions, scripts, and cycle control sheets.

2.4.1 Requirements to be Tested

Summary Conditions	Detailed Condition	New and Enhanced Functionality
CT01	01	Provide capability to display the total count of units (section 8 + low-rent) at the PHA level on the PHA General Information screen under the PHA History Report screen for the selected FYE.
CT01	02	Provide capability to display the count of occupied units on the PHA General Information screen under the PHA History Report screen, for PHAs as well as project levels for the selected FYE.
CT01	03	Provide capability to display count of low-rent units for specified PHA on PHA as well as project levels for the selected FYE.
CT01	04	Provide capability to display the count of Section 8 units on the PHA level for the selected FYE.
CT01	05	Provide capability to display the count of surveyable units (units that have at least one unflagged address) at the project level.
CT01	06	Provide capability to display a "Not Required" message in the Follow-up Plan Certification Date column, on PHA History Report screen for PHAs that are not required to certify their Follow-up Plan.

2.4.2 Expected Results

Summary Conditions	Detailed Condition	Expected Results
CT01	01	The Total Units count should be displayed on the PHA General Information screen. The Total Units is the summation of Section 8 Units and Low Rent Units.
CT01	02	The Occupied Units with Addresses counts will be summed at the PHA level and detailed counts will be displayed at the property level on the PHA General Information screen.
CT01	03	The Low Rent Units counts will be summed at the PHA level and detailed counts will be displayed at the property level on the PHA General Information screen.
CT01	04	The Section 8 counts will be summed at the PHA level and detailed counts will be displayed at the property level on the PHA General Information screen.
CT01	05	The Surveyable Unit counts will be displayed at the property level on the PHA General Information screen.
CT01	06	A "Not Required" message will be displayed on the PHA History Report.

2.0 Test Definition

2.4.3 Extent of Test

The new/modified software units and programs that are to be included in the test for RASS Release 8.4.0.0 are listed below. The overall program functions, screens, and user interfaces are part of these test elements. For program functions please see the Master list of Programs, and Program Descriptions, in the RASS Program Specifications document – sections 1.7, 14.0, 15.0 & 16.0 respectively.

ColdFusion Files	New/Mod
w_rass_PHA_General_Info.cfm	Modified

Stored Procedures	New/Mod
sp_rass_pha_information.sql	Modified
sp_rass_history_report.sql	Modified

Entry Criteria: The unit test plan should be developed as soon as requirements verification is complete. The following tasks must be completed before conducting the unit test:

- Design phase documents must be created, (System/Subsystem Specifications, Database Specifications, Program Specifications, Validation, Verification, and Testing Plan Training Plan)
- Test data is established under the control of the RASS development team and as specified in the RASS Unit Test Plan.
- Test Conditions are documented in the RASS Unit Test Plan, RASS Unit Test Analysis Report and RASS Unit Test Plan.
- Expected results are identified/developed for test event execution.

Exit Criteria: The unit test will be considered complete when the following are accomplished:

- All test conditions of new/modified code in ColdFusion and stored procedure code have been exercised.
- All of the functional requirements for this release have been successfully tested.
- All test results match the expected results from the unit test.

2.4.4 Test Constraints

There are no test constraints in the RASS system.

2.0 Test Definition

2.5 Scoring Process

The objective of the unit test is to thoroughly test the functionality at the module level. Each field, link, button, text block, and object is tested by the developers to insure that the code meets the design specified in the Design Phase documentation. Documentation of this test effort includes test conditions, scripts, and cycle control sheets.

2.5.1 Requirements to be Tested

Summary Conditions	Detailed Condition	New and Enhanced Functionality
CT01	01	Provide capability to assign last assessment's total survey score for each PHA individually by clicking on a button on the Edit PHA Scores screen.
CT01	02	Provide capability to automatically populate the Comments section by "Insufficient survey returns for statistically-valid score issuance. Assigned <FYE> score" when previous score is assigned on the Edit PHA Scores screen, where <FYE> is the last FYE when PHA was given a survey score.
CT01	03	Provide capability for Comments section to be editable on the Edit PHA Scores screen.
CT01	04	Provide capability to transfer last assessment's section scores automatically to the section score fields on the Edit Section Scores screen.
CT01	05	Provide capability to automatically populate the Comments section by "Insufficient survey returns for statistically-valid score issuance. Assigned <FYE> score" when previous section score is assigned on the Edit Section Scores screen.
CT01	06	Provide capability for Comments section to be editable on the Edit Section Scores screen.
CT01	07	Provide capability to automatically notify Field Office and PHA by email message when last assessment's score is assigned.
CT01	08	Provide capability to have the 'From' field in the email messages be Delton Nichols.
CT01	09	Provide capability to display the following flag types in the drop-down selection menu on the Review/Approve PHA Scores Selection screen: Number of surveys returned equals or exceeds the number of surveys sent High percentage discrepancy between number of surveys sent last year and number sent this year Survey score of zero Maximum survey score High percentage discrepancy between last year's survey score and the current survey score FYE change during current assessment period Insufficient surveys returned to issue a valid score Moving to Work Number of surveys returned less than 10% number of surveys sent. Number of surveys returned less than or equal to 1 No surveys sent Number of surveys sent less than 10% of PHAs total unit count

2.0 Test Definition

Summary Conditions	Detailed Condition	New and Enhanced Functionality
		Last Assessment's Score had been assigned
CT01	10	Provide capability to display list of PHAs on the Review/Approve PHA Scores screen based on any one flag selected on the Review/Approve PHA Scores Selection screen, and only when the 'Flagged Survey Scores' radio button is selected.
CT01	11	Remove radio button for Moving to Work Score Type on the Review/Approve PHA Scores Selection screen.

2.5.2 Expected Results

Summary Conditions	Detailed Condition	Expected Results
CT01	01	The assessment score from the most recent survey will be automatically assigned to the present fiscal year.
CT01	02	The comment section was populated with the expected message: "Insufficient survey returns for statistically-valid score issuance. Assigned <FYE> score".
CT01	03	The comment section is editable.
CT01	04	The transfer of the last assessment's section scores were automatically transferred to the Edit Survey Section Scores screen.
CT01	05	The comment section of the Edit Section Scores screen was populated with the expected message: "Insufficient survey returns for statistically-valid score issuance. Assigned <FYE> score".
CT01	06	The comment section was editable on the Edit Section Scores screen.
CT01	07	This action is being performed by NASS.
CT01	08	This action is being performed by NASS.
CT01	09	The drop-down listbox is displayed on the Review/Approve PHA Scores Screen when the radio button for Flagged Survey Scores was selected on the Review/Approve PHA Scores Selection Screen.
CT01	10	Choosing a particular Flagged Category will display the PHAs that have that selected error message associated with the PHA.
CT01	11	The Moving to Work radio button is no longer presented on the Review/Approve PHA Scores Selection Screen.

2.5.3 Extent of Test

The new/modified software units and programs that are to be included in the test for RASS Release 8.4.0.0 are listed below. The overall program functions, screens, and user interfaces are part of these test elements. For program functions please see the Master list of Programs, and Program Descriptions, in the RASS Program Specifications document – sections 1.7, 3.0, 4.0, 6.0, 7.0, 9.0, 12.0 & 13.0 respectively.

ColdFusion Files	New/Mod
review_edit_pha_scores_p1.cfm	Modified
review_edit_pha_scores.cfm	Modified

2.0 Test Definition

ColdFusion Files	New/Mod
edit_pha_score.cfm	Modified
edit_pha_section_score.cfm	Modified
edit_pha_section_score_action.cfm	Modified

Stored Procedures	New/Mod
s_rass_edit_pha_scores.sql	Modified
s_rass_review_pha_score_edits.sql	Modified
s_rass_get_pha_scores1.sql	Modified
sp_rass_get_flagged_category.sql	New

Entry Criteria: The unit test plan should be developed as soon as requirements verification is complete. The following tasks must be completed before conducting the unit test:

- Design phase documents must be created, (System/Subsystem Specifications, Database Specifications, Program Specifications, Validation, Verification, and Testing Plan Training Plan)
- Test data is established under the control of the RASS development team and as specified in the RASS Unit Test Plan.
- Test Conditions are documented in the RASS Unit Test Plan, RASS Unit Test Analysis Report and RASS Unit Test Plan.
- Expected results are identified/developed for test event execution.

Exit Criteria: The unit test will be considered complete when the following are accomplished:

- All test conditions of new/modified code in ColdFusion and stored procedure code have been exercised.
- All of the functional requirements for this release have been successfully tested.
- All test results match the expected results from the unit test.

2.5.4 Test Constraints

There are no test constraints in the RASS system.

2.0 Test Definition

2.6 Comment functionality on Edit Scores Screens

The objective of the unit test is to thoroughly test the functionality at the module level. Each field, link, button, text block, and object is tested by the developers to insure that the code meets the design specified in the Design Phase documentation. Documentation of this test effort includes test conditions, scripts, and cycle control sheets.

2.6.1 Requirements to be Tested

Summary Conditions	Detailed Condition	New and Enhanced Functionality
CT01	01	Provide capability to display the comments when an edited score button is clicked on the Review/Approve PHA Scores screen, even when single quotes (') have been entered in the Comments field on the Edit PHA Scores and Edit Survey Scores screens.

2.6.2 Expected Results

Summary Conditions	Detailed Condition	Expected Results
CT01	01	The comments can be typed on the Review/Approve PHA Scores screen with a single quote and will be inserted and/or updated in the reacs database. The retrieval of the comment with the quote(s) will be displayed on the screen.

2.6.3 Extent of Test

The new/modified software units and programs that are to be included in the test for RASS Release 8.4.0.0 are listed below. The overall program functions, screens, and user interfaces are part of these test elements. For program functions please see the Master list of Programs, and Program Descriptions, in the RASS Program Specifications document – sections 1.7 & 9.0 respectively.

ColdFusion Files	New/Mod
review_edit_pha_scores.cfm	Modified

Entry Criteria: The unit test plan should be developed as soon as requirements verification is complete. The following tasks must be completed before conducting the unit test:

- Design phase documents must be created, (System/Subsystem Specifications, Database Specifications, Program Specifications, Validation, Verification, and Testing Plan Training Plan)
- Test data is established under the control of the RASS development team and as specified in the RASS Unit Test Plan.

2.0 Test Definition

- Test Conditions are documented in the RASS Unit Test Plan, RASS Unit Test Analysis Report and RASS Unit Test Plan.
- Expected results are identified/developed for test event execution.

Exit Criteria: The unit test will be considered complete when the following are accomplished:

- All test conditions of new/modified code in ColdFusion and stored procedure code have been exercised.
- All of the functional requirements for this release have been successfully tested.
- All test results match the expected results from the unit test.

2.6.4 Test Constraints

There are no test constraints in the RASS system.

2.0 Test Definition

2.7 Component Access Date

The objective of the unit test is to thoroughly test the functionality at the module level. Each field, link, button, text block, and object is tested by the developers to insure that the code meets the design specified in the Design Phase documentation. Documentation of this test effort includes test conditions, scripts, and cycle control sheets.

2.7.1 Elements to be Tested

Summary Conditions	Detailed Condition	New and Enhanced Functionality
CT01	01	Provide capability to display the Save and Certify buttons till 11:59:59PM EST on the closing date for Unit Addresses and Language, Implementation Plan, and Follow-up Plan certifications.
CT01	02	Provide capability to restrict PHAs from certifying their Unit Addresses and Language, Implementation Plan, and Follow-up Plan after 11:59:59PM EST from the front-end and back-end.
CT01	03	Provide capability to display an error message to PHAs if they click Save and Certify buttons after 11:59:59PM EST.

2.7.2 Expected Results

Summary Conditions	Detailed Condition	Expected Results
CT01	01	The Save and Certify buttons will only be present before 12:00:00 AM EST for Unit Addresses / Language / Implementation Plan / Follow-up Plan certifications.
CT01	02	If session persists a period of time, certification will be restricted after 11:59:59PM EST for Unit Addresses / Language / Implementation Plan / Follow-up Plan certifications.
CT01	03	Pop-up message will appear if a user tries to click the Certify or Save buttons after 11:59:59PM EST.

2.7.3 Extent of Test

The new/modified software units and programs that are to be included in the test for RASS Release 8.4.0.0 are listed below. The overall program functions, screens, and user interfaces are part of these test elements. For program functions please see the Master list of Programs, and Program Descriptions, in the RASS Program Specifications document – sections 1.7 & 10.0 respectively.

ColdFusion Files	New/Mod
2_rs_impl_plan.cfm	Modified
Language.cfm	Modified
rass_follow_up_plan.cfm	Modified

2.0 Test Definition

Entry Criteria: The unit test plan should be developed as soon as requirements verification is complete. The following tasks must be completed before conducting the unit test:

- Design phase documents must be created, (System/Subsystem Specifications, Database Specifications, Program Specifications, Validation, Verification, and Testing Plan Training Plan)
- Test data is established under the control of the RASS development team and as specified in the RASS Unit Test Plan.
- Test Conditions are documented in the RASS Unit Test Plan, RASS Unit Test Analysis Report and RASS Unit Test Plan.
- Expected results are identified/developed for test event execution.

Exit Criteria: The unit test will be considered complete when the following are accomplished:

- All test conditions of new/modified code in ColdFusion and stored procedure code have been exercised.
- All of the functional requirements for this release have been successfully tested.
- All test results match the expected results from the unit test.

2.7.4 Test Constraints

There are no test constraints in the RASS system.

2.0 Test Definition

2.8 Consortia

The objective of the unit test is to thoroughly test the functionality at the module level. Each field, link, button, text block, and object is tested by the developers to insure that the code meets the design specified in the Design Phase documentation. Documentation of this test effort includes test conditions, scripts, and cycle control sheets.

2.8.1 Elements to be Tested

Summary Conditions	Detailed Condition	New and Enhanced Functionality
CT01	01	<p>Remove all occurrences of consortia functionality from the following screens/functions:</p> <p>Remove message on top of Review/Approve PHA Scores that states consortia exists.</p> <p>Remove 'Adjust Consortium Survey Scores' button from bottom of Review/Approve PHA Scores screen.</p> <p>Remove message displayed to lead PHA's on PHA Main screen, stating they are responsible for certifying all member PHA's.</p> <p>Remove message displayed to member PHA's on PHA Main screen, stating they are member of a consortium.</p> <p>Remove message displayed to lead PHA's on Follow-up Plan screen, stating they are responsible for certifying all member PHA's.</p> <p>Remove message displayed to lead PHA's on Follow-up Plan screen, stating that they survey score has been manually adjusted to reflect weighted average survey score.</p> <p>Remove message displayed to member PHA's on Follow-up Plan screen, stating they are member of a consortium.</p> <p>Remove 'View Consortium Results' button from external Follow-up Plan screen.</p>

2.8.2 Expected Results

Summary Conditions	Detailed Condition	Expected Results
CT01	01	<p>The message stating that consortia exist will not be displayed on the Review/Approve PHA Scores Screen.</p> <p>The submit button will not be displayed on the Review/Approve PHA Scores Screen.</p> <p>The message that determines if the PHA is the Lead in a consortium will not be shown on the PHA Main Screen, including the message "As the Lead Agency you are responsible for Certifying all Participating PHAs within your consortium:"</p> <p>The message that informs that the PHA is a member will not be displayed.</p> <p>The message stating that the consortia are responsible for certifying all</p>

2.0 Test Definition

Summary Conditions	Detailed Condition	Expected Results
		<p>member PHAs will not be displayed.</p> <p>That actual message is located in the Resident Assessment - Review/Approve PHA Scores screen (review_edit_pha_scores.cfm)</p> <p>The message stating that the PHA is a member of consortia will not be displayed.</p> <p>The View Consortium Results button will not be visible from external Follow-up Plan screen.</p>

2.8.3 Extent of Test

The new/modified software units and programs that are to be included in the test for RASS Release 8.4.0.0 are listed below. The overall program functions, screens, and user interfaces are part of these test elements.

ColdFusion Files	New/Mod
2_pha_mainScreen.cfm	Modified
2_rs_impl_plan.cfm	Modified
rass_follow_up_plan.cfm	Modified
rass_score_report.cfm	Modified
review_edit_pha_scores.cfm	Modified
review_edit_pha_scores_action.cfm	Modified
w_rass_follow_up_consortia_rpt.cfm	Modified

Entry Criteria: The unit test plan should be developed as soon as requirements verification is complete. The following tasks must be completed before conducting the unit test:

- Design phase documents must be created, (System/Subsystem Specifications, Database Specifications, Program Specifications, Validation, Verification, and Testing Plan Training Plan)
- Test data is established under the control of the RASS development team and as specified in the RASS Unit Test Plan.
- Test Conditions are documented in the RASS Unit Test Plan, RASS Unit Test Analysis Report and RASS Unit Test Plan.
- Expected results are identified/developed for test event execution.

Exit Criteria: The unit test will be considered complete when the following are accomplished:

- All test conditions of new/modified code in ColdFusion and stored procedure code have been exercised.
- All of the functional requirements for this release have been successfully tested.
- All test results match the expected results from the unit test.

2.8.4 Test Constraints

There are no test constraints in the RASS system.

2.0 Test Definition

2.9 Implementation Plan Activity Dates

The objective of the unit test is to thoroughly test the functionality at the module level. Each field, link, button, text block, and object is tested by the developers to insure that the code meets the design specified in the Design Phase documentation. Documentation of this test effort includes test conditions, scripts, and cycle control sheets.

2.9.1 Elements to be Tested

Summary Conditions	Detailed Condition	New and Enhanced Functionality
CT01	01	Provide capability to enter access dates window for Implementation Plan activities on the Review/Edit Assessment Access Dates screen.
CT01	02	Provide capability to restrict PHA's from entering required and optional Implementation Plan activity dates outside the allowed range or future.
CT01	03	Provide capability to display the following error message to users when saving a date for required or optional Implementation Plan activity outside the allowed window: "The activity dates must be within <start date> and <end date>, and on or before today's date."
CT01	04	<p>Provide capability to display the following messages to PHA's with the activity window dates on the Implementation Plan certification screen:</p> <p>For required activities:</p> <p>"Enter the date that you completed each of the following required items. The date must be within <start date> and <end date>, and on or before today's date."</p> <p>For optional activities:</p> <p>"If you have used other activities to promote the survey, please enter a brief description and date that action was completed. The date must be within <start date> and <end date> and on or before today's date."</p>
CT01	05	Provide capability to prevent user from saving activity dates that are in the future or certifying the Implementation Plan with future activity dates.

2.9.2 Expected Results

Summary Conditions	Detailed Condition	Expected Results
CT01	01	Dates will be saved using the Resident Assessment - Review/Edit Assessment Access Dates Screen for one or many Quarters.
CT01	02	All dates entered will be between the Beginning and Ending dates of the Implementation Plan and on or before the current date.
CT01	03	The error message for Implementation Plan Activities with a Begin Date of

2.0 Test Definition

Summary Conditions	Detailed Condition	Expected Results
		07/01/2004 and an End Date of 11/30/2004 will read as: The activity dates must be within 07/01/2004 and 11/30/2004, and on or before today's date.
CT01	04	The Implementation Plan (External Site) Screen will display the two following messages. Required Activities Enter the date that you completed each of the following required items. The date must be within 07/01/2004 and 11/30/2004 , and on or before today's date. Optional Activities If you have used other activities to promote the survey, please enter a brief description and date that action was completed. The date must be within 07/01/2004 and 11/30/2004 , and on or before today's date.
CT01	05	The user will not be able save date(s) for Activities or Other Activities if the date(s) are prior to 07/01/2004 , after 11/30/2004 or after the current date.

2.9.3 Extent of Test

The new/modified software units and programs that are to be included in the test for RASS Release 8.4.0.0 are listed below. The overall program functions, screens, and user interfaces are part of these test elements. For program functions please see the Master list of Programs, and Program Descriptions, in the RASS Program Specifications document – sections 1.7, 10.0, & 11.0 respectively.

ColdFusion Files	New/Mod
review_edit_assessment_dates.cfm	Modified

Stored Procedures	New/Mod
sp_rass_assessment_dates.sql	New

Entry Criteria: The unit test plan should be developed as soon as requirements verification is complete. The following tasks must be completed before conducting the unit test:

- Design phase documents must be created, (System/Subsystem Specifications, Database Specifications, Program Specifications, Validation, Verification, and Testing Plan Training Plan)
- Test data is established under the control of the RASS development team and as specified in the RASS Unit Test Plan.
- Test Conditions are documented in the RASS Unit Test Plan, RASS Unit Test Analysis Report and RASS Unit Test Plan.

2.0 Test Definition

- Expected results are identified/developed for test event execution.

Exit Criteria: The unit test will be considered complete when the following are accomplished:

- All test conditions of new/modified code in ColdFusion and stored procedure code have been exercised.
- All of the functional requirements for this release have been successfully tested.
- All test results match the expected results from the unit test.

2.9.4 Test Constraints

There are no test constraints in the RASS system.

2.0 Test Definition

2.10 Upgrades to Reports to Support Changes in PHAS Regulation

The objective of the unit test is to thoroughly test the functionality at the module level. Each field, link, button, text block, and object is tested by the developers to insure that the code meets the design specified in the Design Phase documentation. Documentation of this test effort includes test conditions, scripts, and cycle control sheets.

2.10.1 Elements to be Tested

Summary Conditions	Detailed Condition	New and Enhanced Functionality
CT01	01	Provide capability to display the number of PHAs in FYE on the Quarterly Production report based on real-time data present in participant_history table.
CT01	02	Provide capability to continue and complete assessment cycle for PHA's that change FYE or status after RASS assessment creation: Change from current FYE to different FYE. Change in status from low-rent/combined to Section 8. Termination of PHA.
CT01	03	Provide capability to not include PHA's that become part of the current assessment cycle after RASS assessment creation. These changes can be: Change from different FYE to current FYE. Change in status from Section 8 to low-rent/combined. Addition of PHA.
CT01	04	Provide capability to handle FYE and status changes before RASS assessment creation. These changes can be: Change from current FYE to different FYE. Change from different FYE to current FYE. Change in status from low-rent/combined to Section 8. Change in status from Section 8 to low-rent/combined. Termination of PHA. Addition of new PHA.

2.10.2 Expected Results

Summary Conditions	Detailed Condition	Expected Results
CT01	01	When a PHA FYE date is changed to a different quarter, then the PHA FYE count will change on the RASS Quarterly Production Report.
CT01	02	A PHA that has been assessed and later that year its fiscal year end date changed will continue its assessment cycle.
CT01	03	A PHA that has been assessed and later that year its fiscal year end date changed will not be assessed until the following year.
CT01	04	A PHA that has not been assessed and will be assessed at the fiscal year end date that the PHA was assigned.

2.0 Test Definition

2.10.3 Extent of Test

The new/modified software units and programs that are to be included in the test for RASS Release 8.4.0.0 are listed below. The overall program functions, screens, and user interfaces are part of these test elements.

ColdFusion Files	New/Mod
w_rass_Quarterly_Production_Report.cfm	Modified

Stored Procedures	New/Mod
sp_rass_q_prod_rpt.sql	Modified

Entry Criteria: The unit test plan should be developed as soon as requirements verification is complete. The following tasks must be completed before conducting the unit test:

- Design phase documents must be created, (System/Subsystem Specifications, Database Specifications, Program Specifications, Validation, Verification, and Testing Plan Training Plan)
- Test data is established under the control of the RASS development team and as specified in the RASS Unit Test Plan.
- Test Conditions are documented in the RASS Unit Test Plan, RASS Unit Test Analysis Report and RASS Unit Test Plan.
- Expected results are identified/developed for test event execution.

Exit Criteria: The unit test will be considered complete when the following are accomplished:

- All test conditions of new/modified code in ColdFusion and stored procedure code have been exercised.
- All of the functional requirements for this release have been successfully tested.
- All test results match the expected results from the unit test.

2.10.4 Test Constraints

There are no test constraints in the RASS system.

2.0 Test Definition

2.11 The Third Party Administrator Role Code

The objective of the unit test is to thoroughly test the functionality at the module level. Each field, link, button, text block, and object is tested by the developers to insure that the code meets the design specified in the Design Phase documentation. Documentation of this test effort includes test conditions, scripts, and cycle control sheets.

2.11.1 Elements to be Tested

Summary Conditions	Detailed Condition	New and Enhanced Functionality
CT01	01	Provide capability to redirect users to the Third Party Contractor screen when only action code “SSR” exists for the user.
CT01	02	Provide capability to redirect users to the PHA Main screen when one or more action codes, other than “SSR”, exist for the users.

2.11.2 Expected Results

Summary Conditions	Detailed Condition	Expected Results
CT01	01	The user will log onto the external website with the role code of ‘RTP’ and be re-directed to the Third Party Contractor screen.
CT01	02	The user will log onto the external website with the a role code other than ‘RTP’ and be directed to the Main screen.

2.11.3 Extent of Test

The new/modified software units and programs that are to be included in the test for RASS Release 8.4.0.0 are listed below. The overall program functions, screens, and user interfaces are part of these test elements.

ColdFusion Files	New/Mod
Index.cfm	Modified
2_pha_mainscreen.cfm	Modified

Stored Procedures	New/Mod
s_rass_get_role_code.sql	New

Entry Criteria: The unit test plan should be developed as soon as requirements verification is complete. The following tasks must be completed before conducting the unit test:

- Design phase documents must be created, (System/Subsystem Specifications, Database Specifications, Program Specifications, Validation, Verification, and Testing Plan

2.0 Test Definition

Training Plan)

- Test data is established under the control of the RASS development team and as specified in the RASS Unit Test Plan.
- Test Conditions are documented in the RASS Unit Test Plan, RASS Unit Test Analysis Report and RASS Unit Test Plan.
- Expected results are identified/developed for test event execution.

Exit Criteria: The unit test will be considered complete when the following are accomplished:

- All test conditions of new/modified code in ColdFusion and stored procedure code have been exercised.
- All of the functional requirements for this release have been successfully tested.
- All test results match the expected results from the unit test.

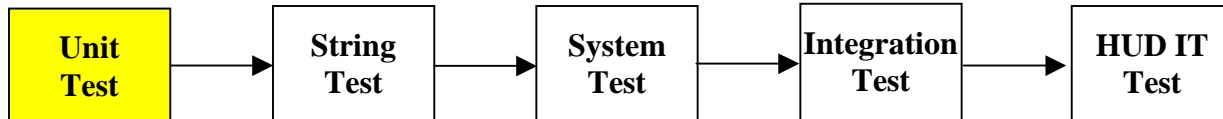
2.11.4 Test Constraints

There are no test constraints in the RASS system.

2.0 Test Definition

2.12 Test Hierarchy

Unit testing is the first stage of code testing in the development lifecycle. System Test cannot begin until unit test is complete.



2.13 Test Data

The RASS development team will determine the data needed for the Subsystem unit, string, system, and integration test. The Test Team will select PHAs, fiscal year end dates and fiscal years that will support the test conditions necessary to execute the unit, string, system, and integration test.

2.13.1 Test Data Reduction

RASS is a web-based application that presents data in a web-browser environment utilizing ColdFusion software. The technique to be used for manipulation of raw test data into a form suitable for evaluation is described below.

- The RASS software will be used to process the data for display in the on-line reports and tables that make up RASS. These tables and reports will be reviewed manually/visually against the test conditions and expected results.
- Additions to the data for PHAs, for report generation, will be entered on-line to create test conditions for the new functionality added to RASS.
- Results will be manually compared on-line against the expected results.

2.13.2 Input Test Data Control

The manner in which input data will be controlled is described below.

- The test data will be selected through a process designed to ensure that the effective minimum number of data types and values are selected to enable the test team to execute planned test conditions.
- Bogus data with values that test for upper and lower expected ranges will be inputted by the RASS development team manually to meet the test conditions.

2.0 Test Definition

2.13.3 Output Test Data Control

Test media may include both electronic and paper-based formats. All unit, system, and integration testing for RASS 8.4.0.0 will take place in the RASS development environment. For unit, system, and integration testing purposes RASS developers will utilize test data that produces known values during data submission. Test output will be compared with the expected 'known' value to ensure output validity. Invalid output will be analyzed to isolate and correct the cause. Testing will continue until valid and correct test output is produced.

2.13.4 Data Recovery

The unit test database used for performing the RASS unit testing will be initially refreshed by the Development Coordination Group (DCG). The rollback of test data will be performed by the unit test team when required.

2.13.5 Test Data Handling

Test data was identified based on the modules that will be created for RASS Release 8.4.0.0. PHAs were selected to insure all PHA sizes and Fiscal Year End groups were represented.

2.14 Input Commands

Web interface modules will utilize the HUD standard browser Internet Explorer 6.0, in order to initialize the unit test, to halt or interrupt the test, to repeat unsuccessful or incomplete tests, or to terminate the test. Stored procedure modules will utilize either SQL Advantage or SQL Programmer to execute the procedures with the appropriate test input variables.

2.15 Output Notification

Web interface modules will utilize the HUD standard browser Internet Explorer 6.0, in order to receive output notifications concerning system or program status. A system error message will be displayed when the user attempts to log on should the system not be ready for testing.

Stored procedure modules will utilize either SQL Advantage or SQL Programmer to execute the procedures with the appropriate test input variables. unit testing will be done with the timers and showplan enabled to allow detailed analysis of internal performance.

2.0 Test Definition

2.16 Support Software

The support software environment is comprised of the following software packages:

Application	Description
ColdFusion Studio 5.0	Application development software
Internet Explorer 6.0	Web browser
PVCS Tracker	Issue tracking database application
PVCS Version Manager	Software version control application
SQL-Advantage	Interface to the Sybase database
SQL-Programmer	Interface to the Sybase database
SSH Secure Shell (SFTP)	Program to upload new software to environment

2.17 Error Handling

Errors encountered during unit, system, and integration testing will be identified, corrected, and re-tested, until valid and correct results are produced. These results must be in compliance with the Program Specifications and Functional Requirements documents for RASS 8.4.0.0.

2.18 Test Conditions

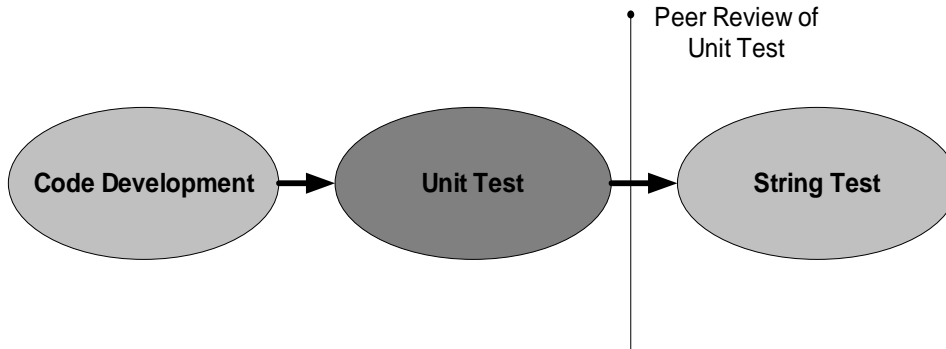
The testing for RASS Release 8.4.0.0 will be performed using normal input methods against a copy of the standard PIH-REAC database model. There are no special test input methods required for the Unit, System, or Integration Test.

3.0 TEST EXECUTION

3.0 Test Execution

3.0 TEST EXECUTION

The team conducts unit test immediately after code development. In addition, a peer review of both code and unit test will be conducted prior to the beginning of system test.



3.1 Test Schedule

The team will conduct unit test at the development site by the development team prior to system test during the period of 8/23/04 – 10/19/04.

3.2 Test Progression

The team will provide a complete run through all of the unit test script steps unless a showstopper error prevents moving forward. Testing is not complete until an entire pass has run completely without errors and each step's expected results are met.

3.3 Test Criteria

The team evaluates actual unit test results against the criteria documented in the "Expected Results" column for each unit test script step.

3.3.1 Tolerance

RASS accepts PHA user input with text and decimal values. Textual data must be carried forward and displayed with no discernable variances. The Scoring Process accepts and displays decimal values to five (5) significant digits in the participant_assessment Table, but will be accepted, displayed and stored as

3.0 Test Execution

three (3) significant digit value in the participant_assess_action Table.

3.3.2 Samples

The team tests each item for normal, error, and exception processing as defined below:

Normal – Actions that the user should take within the system under normal use.

Error – Actions that the user should not take, but should be controlled through error messages and field constraints (user enters an invalid user name in log-in).

Exception – Tests handling of unlikely, but theoretically possible conditions (database server crash).

3.3.3 System Breaks

The number of interrupts, halts, or other system breaks, which may occur because of non-test conditions, is not applicable to unit testing.

3.4 Test Control

Test scripts are controlled manually. Stored procedures are run along with an alternative query noting that the actual and expected results should be identical.

3.5 Test Procedures

3.5.1 Setup

Test setup consists of preparing the environment for testing through requests for web server, ColdFusion (CF) server, and database server through DCG and HUD IT.

3.5.2 Initialization

Initialization of the Unit, System, and Integration Test sequence involves entering valid test data into the data input fields onscreen, executing or otherwise causing any involved processing to occur, and monitoring the data output onscreen. The results of each test will be read and compared to the expected output.

3.5.3 Preparation

The team defines any required preparation information in the test script. Such steps may include data dumps, instructions for data recording, and modifications of the database.

3.0 Test Execution

3.5.4 Termination

Output from the Unit Test cycle will be evaluated for compliance with the expected output as specified in the Functional/Program requirements. The Unit Test phase will be terminated when all new or modified code modules are successfully tested.

3.5.5 Test Cycle Performance Activities

Test cycle activities include the test run, verification of actual results against expected results for each unit test step, documentation of errors, correction of errors, and test rerun if require